radiation **by continuous movement of said ensemble through a beam produced by said stationary X-ray exposure system**,

detecting **the** X-ray radiation transmitted through said ensemble of objects **with said stationary X-ray detection system**, and providing to said computer X-ray data corresponding to the intensity of transmitted radiation,

over the area of the thus-exposed ensemble, calculating a value characteristic of said target object of said specific material of interest in said ensemble of objects, and therewith identifying said target object,

systematically utilizing in said calculation**s** X-ray transmission data of rays **from said stationary X-ray exposure system** passing through said ensemble of objects, including rays passing through said target object of said specific material of interest as well as rays passing near but not through said target object to remove the contribution of overlying and underlying material from the calculated value characteristic of said target object of said specific material of interest, and

automatically indicating the presence of said target object while said ensemble of objects progresses on said conveyor,

and wherein the calculating step further includes choosing at least one target region and successively examining a plurality of regions in the neighborhood of said at least one target region.

2 ̶9̶3̶. The method of claim ̶9̶2̶ wherein X-ray data from rays that pass through different regions of said target object of said specific material of interest are employed in said calculation**s in**

2

a manner that effectively averages many pixels over contiguous regions to reduce noise in calculating said value.

In claim 82, change the dependency from claims "82, 85 or 86" to --82, 83 or 85--.

In claims 96, 100-103, 108, 110 and 113-114, change the dependency from claims "82 or 85" in each case to --82 or 152--.

115 (Amended) A device for detecting a target object of a specific material of interest in [an] a continuously moving ensemble of initially unidentified objects, comprising [for use with] a conveyor arranged to move said ensemble of objects continuously through an inspection station [comprising:].

a stationary X-ray exposure system [,] and a stationary X-ray detection system both constructed to operate cooperatively with said conveyor, and a computer operatively connected to said detection system,

said stationary X-ray exposure system constructed and positioned to progressively expose, at said inspection station, said ensemble of initially unidentified objects to X-ray radiation by continuous movement of said ensemble through a beam produced by said X-ray-exposure system,

said stationary X-ray detection system positioned to detect X-ray radiation transmitted through said ensemble of objects, and constructed to provide to said computer X-ray data corresponding to the intensity of transmitted radiation,

said computer programmed to calculate, over the area of the thus-exposed ensemble, a value characteristic of said target

3

object of said specific material of interest in said ensemble of objects, and therewith identifying said target object,

said computer programmed to *systematically* utilize in said calculations X-ray transmission data of rays *from said stationary X-ray exposure system* passing through said ensemble of objects, including rays passing through said target object of said specific material of interest as well as rays passing near but not through said target object to remove the contribution of overlying and underlying material from the calculated value characteristic of said target object of said specific material,

~~said computer programmed so that the removal of the contribution of overlying and underlying material from said calculated value is dependent upon determining an edge of the target object,~~ and

said computer programmed to indicate the presence of said target object.

add

Please ~~cancel dependent claim 87 and rewrite in~~ independent form as claim 152.

~~152.~~ A method of detecting a target object of a specific material of interest in a continuously moving article of luggage or package the contents of which are initially unidentified, comprising:

providing a stationary X-ray exposure system capable of producing at least one fan beam of X-ray radiation, a stationary X-ray detection system capable of detecting fan beam radiation, and a computer operatively connected to said detection system,

4

continuously moving said ensemble of objects on a conveyor through an inspection station,

at said inspection station, progressively exposing said article of luggage or package to X-ray radiation by continuous movement of said article of luggage or package through said fan beam produced by said stationary X-ray exposure system,

detecting the X-ray radiation transmitted through said article of luggage or package with said stationary X-ray detection system, and providing to said computer X-ray data corresponding to the intensity of transmitted radiation,

over the area of the thus-exposed article of luggage or package, calculating values characteristic of said target object of said specific material of interest in said luggage or package and therewith identifying said target object,

systematically utilizing in said calculations X-ray transmission data of rays from said stationary X-ray exposure system passing through said article of luggage or package, including rays passing through said target object of said specific material of interest as well as rays passing near but not through said target object to remove the contribution of overlying and underlying material from the calculated value characteristic of said target object of said specific material of interest, the removal of the contribution of overlying and underlying material from said calculated value being dependent upon determining an edge of the target object, and

5